

WHAT IS CLAIMED IS:

1. An agriculturally active composition comprising a self-incompatibility regulating compound having the chemical formula:

5 $ML_n \cdot y X \cdot w H_2O$

wherein:

M is a cation of either copper(II) or zinc(II);

L is a chelate or complex-forming moiety associated with the cation M which is either an O-donor or N-donor or S-donor or any combination of
10 them;

X is an anionic moiety to balance the total charge of ML_n to neutral;

n is an integer in the range of from 0 to 6;

y is an integer in the range of from 0 to 2; and

w is an integer or fraction in the range of from 0 to 24.

15

2. A composition as claimed in claim 1, wherein n is 1 and L is bidentate or polydentate ligand or multi-complex-forming moiety.

20

3. A composition as claimed in claim 1, wherein n is 2 and L's are the same kind of chelates or different chelates each other.

4. A composition as claimed in claim 1 to 3, wherein additional molecules are complexed to neutralize the charge of the compound having the

chemical formula.

5. A composition as claimed in claim 1, wherein L is a lipophilic ligand from the class of either oxygen-donors, sulfur-donors or nitrogen-donors; a conjugate base molecule from the class of carboxylic acids, organo-sulfonic acids, organo-sulfinic acids, organo-sulfenic acids, organo-phosphonic acids, thiocarboxylic acids, alcohols, thiols, phenols, thiophenols, oximes, sulfonamides, sulfonylureas, imides, acetoacetates and thiocarbamate; ethylenediamines, imidazole, pyridines and pyrimidines.

10

6. A suspension or emulsion concentrate comprising a composition as claimed in claim 1 and a thickening agent.

15 7. A suspension concentrate as claimed in claim 6 comprising from 5 to 90 wt. % of a compound of formula I as claimed in claim 1, from 0 to 50 wt. % of another active ingredient, from 0 to 10 wt. % of thickening agent and/or surfactants and/or other performance materials.

20 8. A method for the breakdown of the self-incompatibility of a gametophytic self-incompatible plant which comprises applying a composition as claimed in claim 1 in solid form or in solution form.

9. A method for the production of the self-pollinated seed which is self-fertilized from a gametophytic self-incompatible plant which comprises applying a composition as claimed in claim 1 and 6.